Electronic Version
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INTEGRATED CIRCUIT HAVING PAIRS OF PARALLEL COMPLEMENTARY FINFETS

Abstract

A method and structure for an integrated circuit structure that utilizes complementary fin-type field effect transistors (FinFETs) is disclosed. The invention has a first-type of FinFET which includes a first fin, and a second-type of FinFET which includes a second fin running parallel to the first fin. The invention also has an insulator fin positioned between the source/drain regions of the first first-type of FinFET and the second-type of FinFET. The insulator fin has approximately the same width dimensions as the first fin and the second fin, such that the spacing between the first-type of FinFET and the second-type of FinFET is approximately equal to the width of one fin. The invention also has a common gate formed over channel regions of the first-type of FinFET and the second-type of FinFET. The gate includes a first impurity doping region adjacent the first-type of FinFET and a second impurity doping region adjacent the second-type of FinFET. The differences between the first impurity doping region and the second impurity doping region provide the gate with different work func-

tions related to differences between the first-type of FinFET and the second-type of FinFET. The first fin and the second fin have approximately the same width.